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## APPENDICES

APPENDIX A —SCHEDULES

APPENDIX B.—INSTRUCTIONS TO SPECIAL AGENTS

# APPENDIX A.

## SCHEDULES.

### CENSUS OF TELEPHONES.

[D6-232]

(All commercial and mutual or cooperative telephone systems, long-distance toll lines, and independent farmer or rural lines must be reported.)

Name of company or system.....

State..... City.....

General office (give state, city, street, and number).....

WASHINGTON, D. C., December 31, 1907.

The act of Congress of June 7, 1906, directs the Director of the Census to take a census of telephones every five years, and this schedule has been formulated for that purpose.

The information returned on this schedule should cover the business year of the company most nearly conforming to the year ending December 31, 1907. All questions that require a fixed time, such as cash on hand, wire mileage, stations, etc., should be of the date of the last day of the year covered by the report.

The answers to inquiries in regard to financial matters will be held absolutely confidential; the separate reports will be combined so as to show totals for all companies in the different states. No publication will be made in the census reports disclosing the operations of individual companies. The information will be used only for the statistical purposes for which it is given.

The canvass is to be made under the supervision of Mr. W. M. Steuart, chief statistician for manufactures.

S. N. D. NORTH,  
Director of the Census.

Extract from act of Congress, March 3, 1899:

SECTION 22. \* \* \* "And every president, treasurer, secretary, director, agent, or other officer of every corporation, and every establishment of productive industry, whether conducted as a corporate body, limited liability company, or by private individuals, from which answers to any of the schedules, inquiries, or statistical interrogatories provided for by this act are herein required, who shall, if thereto requested by the Director, supervisor, enumerator, or special agent, willfully neglect or refuse to give true and complete answers to any inquiries authorized by this act, or shall willfully give false information, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding ten thousand dollars, to which may be added imprisonment for a period not exceeding one year."

#### CERTIFICATE.

THIS IS TO CERTIFY that the information contained in this schedule is complete and correct to the best of my knowledge and belief, and it covers the period from

....., 190', to..... 190 .

(Signature and official designation of the person furnishing the information.)

(Address of person furnishing the information.)

(Signature of Special Agent.)

1. Does company do telegraph business? (Answer Yes or No).....
2. Character of ownership: State the form of ownership as it existed on the last day of the year covered by the report, whether individual, firm or partnership, mutual company, cooperative association, incorporated company, or other form (if mutual or cooperative and also incorporated, give both).....
3. If a consolidated company, give names and location of constituent companies included in this report, or write same on last page.....

4. If a reorganized company, give name of original company.....
5. If a subsidiary or leased company, give name and address of operating company or lessee.....
6. States in which exchanges or stations are operated.....
7. Cities, towns, or villages in which operated: It is desired to obtain a list that will indicate the territory covered by the system. A general description or printed list of places will answer.....
8. Names and addresses of farmer or rural lines connected with but not owned by the company reporting, or write same on last page: Give only the lines for which statistics are *not* included in this report.....

#### 9. LINE CONSTRUCTION.

This inquiry calls for the total length of construction, but not the length of single wire which should be reported under Inquiry 10. The miles reported for pole line should be the length covered by poles upon which either single wire or cable is strung.

CLASS.	Number of miles. <sup>1</sup>
Pole line for wires or cables (exclusive of farmer or rural lines owned).....	
Pole line for farmer or rural lines owned by company.....	
Overhead cable.....	
Subways or conduits (length of street occupied).....	
Duct owned by company reporting (total length of single duct).....	
Duct leased from other companies or municipalities (total length of single duct).....	
Cable in underground subways or conduits.....	
Submarine cable.....	

#### 10. MILES OF SINGLE WIRE.

The answers to this inquiry should show the total number of miles of single wire in operation, or ready for operation, on the last day of the year covered by the report. If actual length is not known, give careful estimate.

CLASS.	Number of miles of single wire.
Open single wire on pole or roof line (exclusive of farmer or rural lines owned).....	
Single wire on farmer or rural lines owned by company.....	
Single wire in overhead cables.....	
Single wire in subways or conduits.....	
Single wire in submarine cables.....	
Total.....	

If company owns and operates wires in more than one state, give names of states and total miles of single wire in each.....

<sup>1</sup> Length to be stated in miles and decimals of a mile carried to one place.

## MISCELLANEOUS STATISTICS.

For census purposes a "Public exchange" is a place where wires are interchanged by means of a switchboard for the use of the public generally; a "Private branch exchange" is a switchboard within a business building, apartment house, hotel, etc., establishing interior communication, also outside communication by a trunk line to the public exchange. The number of these private branch exchanges and their stations should be reported by the exchange company through which they operate.

Number.

## Exchanges:

Public exchange offices.....	.....
Private branch exchanges.....	.....
Total number of exchanges.....	.....

Stations, boxes, or telephones of all kinds (the terms "stations" or "telephones" cover the telephone set of two instruments—transmitter and receiver):

Regular exchange subscribers' stations, including those on farmer or rural lines and party lines owned by company (do not include private branch exchange stations).....	.....
Private branch exchange stations.....	.....
Regular exchange local pay and outlying toll stations.....	.....
All other classes of stations (state kind).....	.....
Total stations, boxes, or telephones.....	.....

Number of stations or telephones for exclusive use of company for communication between its different departments (include all stations or phones not used by subscribers or as pay stations, and therefore not reported above).....

Number of party lines.....	.....
Number of stations on these party lines (included above but here reported separately).....	.....

Number of farmer or rural lines owned by company.....	.....
Number of stations on these farmer or rural lines (included above but here reported separately).....	.....

Estimated total number of messages or talks (originating calls) handled by the exchange system during the year (do not include interior private branch calls or free talks):

Exchange messages.....	.....
Long-distance and toll messages.....	.....
Total messages or talks.....	.....

If company owns and operates stations or telephones in more than one state, give names of states and total number of stations or telephones in each.....

## 12. SWITCHBOARDS, POWER PLANT, AND BATTERIES.

	Num- ber.	Total number of drops or jacks in use.		Num- ber.	Total capacity in horse- power. <sup>1</sup>
Subscribers' or A switchboards:			Engines for tele- phone service:		
Manual switch- boards—			Steam.....	.....	.....
Common bat- tery system.....	.....	.....	Gas.....	.....	.....
Magneto sys- tem.....	.....	.....	Dynamos for tele- phone service <sup>2</sup> .....	.....	.....
Automatic switch- boards.....	.....	.....	Electric motors for telephone service <sup>3</sup> .....	.....	.....
Separate toll switch- boards.....	.....	.....			
Incoming trunk or B switchboards.....	.....	.....			

<sup>1</sup> Horsepower to be stated in whole numbers and one-place decimal.  
Do not include motor generators or dynamotors for ringing.

Total number of drops or jacks equipped, or ready for use, of all subscribers' or A switchboards.....; number of main distributing frames.....; number of intermediate distributing frames, if any.....; number of hand magneto-generators, and power-driven ringers in central offices.....; number of cells of primary batteries in central offices.....; number of cells of storage batteries.....

## 13. EMPLOYEES, SALARIES, AND WAGES.

The average number employed during the year is the number that would be required, at continuous employment, for the twelve months. If any of the persons enumerated were employed only a portion of the time, give only the wages paid in connection with the telephone service. Account for all regular officers and employees, whether engaged on maintenance, canvassing, collecting, operation, or otherwise. (Do not include employees engaged exclusively on additions or extensions.)

	Average number employed during the year.	Total amount paid in sala- ries and wages dur- ing the year.
Salaried employees:		
Salaried officers of corporation.....	.....	\$.....
Other officers (superintendents, general managers, ex- change managers, electricians, draftsmen, and ex- perts).....	.....	.....
Clerks and bookkeepers.....	.....	.....
Total.....	.....	\$.....
Wage-earners (do not include salaried employees reported above):		
Operators—		
Male.....	.....	\$.....
Female.....	.....	.....
All other employees (including foremen, inspectors, so- licitors, collectors, linemen, wiremen, battery-men, messengers, troubleshooters, and laborers).....	.....	.....
Total.....	.....	\$.....

## 14. INCOME AND EXPENSES FOR THE YEAR COVERED BY THIS REPORT.

## INCOME.

Give the total amount of income for the year as indicated by the books of the company. If accounts do not show the income from each source enumerated, give a carefully estimated segregation.

Total income from telephone business.....	\$.....
Interest on bonds and dividends on stock of other telephone companies.....	.....
Income from other permanent investments.....	.....
Leased telephone lines, wires, and conduits.....	.....
Real estate rentals.....	.....
Interest.....	.....
Assessments (for mutual companies or cooperative associa- tions).....	.....
Miscellaneous (specify principal items).....	.....
Total.....	\$.....

## EXPENSES.

The item, "Total general operation and maintenance," should include, in addition to legal expenses and salaries and wages, all expenditures during the year for supplies and materials used in operation and maintenance, and all other expense incident to operation and maintenance not elsewhere reported. (Do not include expenditures for additions or extensions which should be included under Inquiry 15, "Cost of lines, real estate, equipment, etc., added during the year.")

Total general operation and maintenance, including legal ex- penses, and total salaries and wages of Inquiry 13.....	\$.....
Rentals on instruments and apparatus.....	.....
Rentals of offices and other real estate.....	.....
Rentals of conduits and underground privileges.....	.....
Telephone traffic paid or due for the year to other companies.....	.....
Miscellaneous (specify principal items).....	.....

## EXPENSES—continued.

Taxes paid or due for the year:	
Real and personal property.....	
Capital stock.....	
Earnings.....	
Miscellaneous (specify items).....	
Interest paid or due for the year:	
Bonds (from Inquiry 17).....	
Real estate mortgages.....	
Floating debt.....	
Paid for use of leased lines.....	
Total.....	\$.....
Net income for the year.....	\$.....
Net deficit for the year.....	\$.....

15. Cost of lines, real estate, equipment, etc., added during the year (Indicate whether by purchase or construction)..... \$.....  
 (The total reported here should also be included in the first question, "Cost of construction and equipment," under "Assets" of Inquiry 16, "Balance sheet.")

## 16. BALANCE SHEET.

ASSETS.		LIABILITIES.	
Kind.	Amount.	Kind.	Amount.
Cost of construction and equipment, including real estate and telephones.....	\$.....	Capital stock.....	\$.....
Stocks and bonds of other telephone companies.....		Bonds.....	
Other permanent investments (specify).....		Real estate mortgages.....	
Cash and deposits.....		Floating debt (loans and notes).....	
Bills and accounts receivable.....		Cash investment (for unincorporated companies or systems).....	
Machinery, tools, and supplies.....		Reserves.....	
Sundries (specify principal items).....		Bills and accounts payable.....	
Profit and loss deficit.....		Interest due and accrued.....	
Total.....	\$.....	Dividends due.....	
		Sundries (specify principal items).....	
		Profit and loss surplus.....	
		Total.....	\$.....

Is value of franchise included in "Cost of construction and equipment?" (Answer Yes or No).....

## 17. CAPITAL STOCK, BONDS, DIVIDENDS, AND INTEREST.

	Number of shares or bonds.	Total par value.	Dividends declared and interest paid or due for the year.	
			Rate.	Amount.
Authorized capitalization by charter:				
Common stock.....	\$.....		XXXX	XXXXXXXXXX
Preferred stock.....			XXXX	XXXXXXXXXX
Bonds.....			XXXX	XXXXXXXXXX
Capital stock and bonds outstanding:				
Common stock.....		\$.....		
Preferred stock.....				
Bonds.....				

The following inquiry comprises a part of the annual investigation of consumption of forest products: It is desired to ascertain the number of poles purchased during the entire year. The number reported here need not necessarily agree with the cost included in the first question under "Expenses," of Inquiry 14, "Income and expenses," which relates to the poles used during the year.

## 18. POLES PURCHASED DURING 1907.

LENGTH, FEET.	CEDAR.		CHESTNUT.		JUNIPER.		OTHER SPECIES. (Specify.)	
	Num-ber.	Aver-age cost per pole at point of purchase.	Num-ber.	Aver-age cost per pole at point of purchase.	Num-ber.	Aver-age cost per pole at point of purchase.	Num-ber.	Aver-age cost per pole at point of purchase.
Under 20.....								
20 and over but under 25.....								
25 and over but under 30.....								
30 and over but under 35.....								
35 and over but under 40.....								
40 and over but under 45.....								
45 and over but under 50.....								
50 and over but under 55.....								
55 and over but under 60.....								
60 and over.....								

How many treated poles were purchased during 1907?.....

What preservative was used?.....

How many poles were treated during 1907?.....

What preservative was used?.....

## FARMER OR RURAL TELEPHONE LINES.

[DS-235]

WASHINGTON, D. C., December 31, 1907.

DEAR SIR:

The act of Congress of June 7, 1906, directs the Director of the Census to take a census of telephones every five years. All farmer or rural telephone lines, companies, or systems must be included in the census, and it is necessary that they answer the following inquiries. It is of importance that the statistics be compiled and published as soon as possible. I shall, therefore, be pleased to have you, or some person representing your line or system, answer the following questions and return this schedule at once in the inclosed official envelope, which requires no postage.

Very respectfully,

S. N. D. NORTH,  
Director of the Census.

Is there a telephone line or system owned and operated by the party to whom this schedule is addressed?.....

Name of line or system.....

State or states in which operated.....

City (post-office address of business office).....

Ownership of line or system (state whether individual, firm or partnership, incorporated company, mutual company, or cooperative association).....

Number of lines in operation, December 31, 1907.....

How many miles of single wire in the entire line or system, December 31, 1907?.....

Do you operate a "central" or switchboard of your own?.....

Give capacity of switchboard (number of drops or jacks).....

Does your line or system connect with any other "central" or switchboard; if so, who owns it, and where is it located?.....

How many subscribers' telephones on your line or system, December 31, 1907?.....

How many exclusively toll or pay stations on your line or system, December 31, 1907?.....

Give total income, if any, from operation of line or system during 1907.....\$.....

Give total amount of assessments, if any, levied for operation or maintenance of line or system during 1907.....\$.....

What were the total expenses of operating line or system during 1907?.....\$.....

Names and addresses of other farmer or rural lines or systems in your vicinity (use back of schedule if necessary).....

(Signature, address, and official title of person furnishing the information.)

## APPENDIX B.

### INSTRUCTIONS TO SPECIAL AGENTS.

#### SCHEDULES D6-232 AND D8-235.

All commercial and mutual or cooperative telephone systems that have an exchange or "central" must be reported on Schedule D6-232.

Independent farmer or rural lines that have no exchange or "central" of their own must be reported on the short schedule, Schedule D8-235. The statistics for farmer or rural lines that are owned and operated by commercial companies must be included in the reports for such companies made on Schedule D6-232. (See also p. 128.)

The American Telephone and Telegraph Company, of Boston, Mass., operates exchange systems and long-distance toll lines in practically every state in the Union. These properties usually have a local name and are commonly known as the "Bell system." Census reports for all Bell systems will be prepared at the office of the parent company in Boston and agents should not attempt to secure these reports in the field. A list showing the Bell systems in each state will be furnished each agent. The agent must secure reports for all so-called Bell systems which *do not* appear on this list.

#### COMMERCIAL AND MUTUAL COMPANIES. (SCHEDULE D6-232.)

*Combined reports.*—A separate report for each exchange of the same system in a given state is not required. If a company operates exchanges in more than one state, separate reports for each state should be secured if the system of accounts will permit. If only a few lines or a comparatively small proportion of the company's wire and stations is in another state, one report for the entire system may be prepared, showing the miles of wire and stations in each state as called for by the subquestions of Inquiries 10 and 11 of the schedule.

When one company leases and operates another system the report for the operating company may include the statistics for the leased system, treating it as if it were owned. In these cases the agent should be particular to see that the combined report includes the line construction, wire mileage, stations, cost of construction and equipment, and capitalization of the leased system, and that the name of the system is given in Inquiry 3. Systems which are controlled by ownership of stock, etc., and operated independently should have separate reports.

#### INQUIRY 1.—DOES COMPANY DO TELEGRAPH BUSINESS?

It is probable that a few telephone companies will be found that do a telegraph business. Where a telephone company does a telegraph business incidentally, one report should be made on Schedule D6-232 for the entire system; but in the case of large telegraph companies doing a telephone business incidentally, the combined report should be made on Schedule BB1-236, for telegraph companies.

It is the practice of some of the telephone companies to lease or rent some of their wires for the year or other specific period for telegraphic work, as, for example, to stock brokers, provision houses, etc. In other cases the companies may employ systems

which allow the successful transmission of telegraph and telephone messages at the same time over the same wires; and it is understood that these composite circuits are on the increase. Where the company leases its wires for telegraph work the fact should be ascertained and stated under "Remarks." And if the company is using the same wire or wires for simultaneous telegraph and telephone work, the fact should also be noted as fully as possible.

#### INQUIRY 7.—CITIES, TOWNS, OR VILLAGES IN WHICH OPERATED.

If the company reporting owns or operates an exchange system in more than one city, town, or village, a complete list of exchanges and toll stations should be returned with the schedule, or written under "Remarks" on last page.

It will be understood that the schedule does not require the enumeration of every station, but that the object is to enumerate every place to which telephone facilities have been extended. The toll stations will therefore, in this sense, describe a place where the company does business, but where that business is not large enough to warrant the establishment of a regular central office or exchange.

#### INQUIRY 8.—NAMES AND ADDRESSES OF FARMER OR RURAL LINES, ETC.

The statistics for farmer or rural lines owned by the company reporting must be included in the report, but such lines when operated independently must be reported on Schedule D8-235.

#### INQUIRY 9.—LINE CONSTRUCTION.

The object of this inquiry is to obtain a description of the line and the total length of the construction, but not the length of the single wire, which should be reported in answer to Inquiry 10. The number of miles reported as "pole line for wire or cable, etc.," and as "pole line for farmer or rural lines owned by the company," must be the thoroughfare or highway length in miles covered by the poles on which wire is strung, whether cables or single wire. In like manner report the length of overhead, underground, and submarine cable and of street occupied by subways or conduits. Underground conduits or ducts are generally owned by the telephone companies. There are, however, a few instances in which they are owned by an underground conduit company or by the municipality. In these cases the telephone company pays for the privilege of using the ducts through which its wires and cables are drawn. A separation of the owned and leased ducts should be made. All the construction, *except duct*, should be understood to mean that which is owned by the company reporting. (See instructions for "combined reports," p. 125.)

#### INQUIRY 10.—MILES OF SINGLE WIRE.

The answers to this inquiry must show the total number of miles of single wire in operation, or ready for operation, on the last day of the year covered by the report. Cables are generally composed of a number of pairs of wires; the total miles of single wire in cables must be reported. If the actual length of the total

single wire or of the different classes is not known, careful estimates must be secured.

The total number of miles of single wire must be shown by states; therefore the actual number of miles operated in each state, or else an estimate, must be obtained from each company.

#### INQUIRY 11.—MISCELLANEOUS STATISTICS.

*Exchanges.*—A public-exchange office is a place where wires are interconnected by means of a switchboard for the use of the public generally. The number of these is called for. A private-branch exchange is a switchboard within a business building, apartment house, hotel, etc.—sometimes in a residence—through which wires, running from one building or department, or office, or room, to another, are connected, thus establishing interior communication. Conversation with the outside world through the private-branch exchange is had by connection with the public-exchange office. The number of these private exchanges must be reported by the company through which they operate.

It should be noted, however, that the use of the word "exchange" is more particularly a practice limited to the Bell system. With the independent telephonists—i. e., those who are not operating as licensees of the American Telephone and Telegraph Company, which is the parent company of the Bell system—it is quite a common practice to call the exchange a "central office," and to use this phrase to the entire exclusion of the word "exchange." The function of the two is, however, identical, the exchange being a central office and the central office being an exchange. It will be found that both among Bell telephonists and independents the exchange, or central office, is colloquially called "central," this being also the descriptive term used by subscribers.

*Stations, boxes, or telephones of all kinds.*—The terms "stations," "boxes," and "telephones" are each intended to cover the complete instrument or telephone set of transmitter and receiver. The total number of sets or complete instruments installed and the number for each of the four classes enumerated must be reported. There should be no difficulty in ascertaining the number furnished regular exchange subscribers or the number of exchange local pay, and outlying toll stations. If there is no record of the number of stations connected with private-branch exchanges, careful estimates must be secured.

The number of stations or telephones operated by the company for communication between its different offices or departments must be reported separately.

*Party lines and farmer or rural lines owned by company.*—The number of these lines owned by the company can be ascertained easily, and must be reported separately, together with the total number of stations or telephones on such lines.

*Estimated total number of messages or talks, etc.*—In reply to this inquiry the total number of messages or talks—originating calls—should be given, except those over private-exchange wires. The total should include all long-distance and toll connections and subscribers' talks, but be careful to follow instructions on schedule *not* to include interior private-branch calls or free talks.

All talks or messages from stations within the same central-office or exchange district are to be counted as exchange messages, as these do not imply any exchange of business between separate companies or separate exchange systems. It will happen, however, that pay stations are very often used for long-distance service, and in this event it is believed that all companies will have records bearing upon this point and giving the separate figures, enabling the separation to be made between simple exchange connections and the "extraterritorial" work.

A long-distance message may be defined as one between exchange systems of different companies, and a toll message as one between exchange systems of the same company, but these definitions are subject to modification, and the practice of the companies submitting reports may be accepted. In securing information for the schedule it will probably be found that a wide

variation exists in the application of the terms "long distance" and "toll message;" but the object is to separate or distinguish the long-distance and toll messages from the regular conversations within the central-office or exchange district for which no extra charge is made.

The number of stations or telephones in the different states must be reported separately for the same reason that the wire mileage is reported by states. (See instructions for Inquiry 10.)

#### INQUIRY 12.—SWITCHBOARDS, POWER PLANT, AND BATTERIES.

Subscribers' switchboards are, as a rule, classed as "manual;" that is, they are operated by the hand of the operator, who connects the calling subscriber's line with the line of the number asked for, by means of a plug and cord. Occasionally an "automatic" switchboard will be found by which the subscriber, using a device attached to his telephone box, can make connection with the person with whom he desires to converse, without the intervention of an exchange operator at central.

The number of manual switchboards operated by the common-battery system and the number by the magnetosystem are required to be given separately, together with the number of drops or jacks of each *in use*. A common-battery system is often called "central-energy system," there being a battery, usually storage, though possibly primary, located at the exchange for operating all the subscribers' stations. In a magnetosystem a primary battery is at each telephone station or box. This furnishes the current for conversation; the current for the ringing up of central is created by a magneto-generator attached to each telephone. The subscriber, by turning a little crank, sets the electro-magnet revolving and thus sends in his signal. With the common-battery system, the removal of the receiver from its hook closes a circuit and lights a lamp or operates a drop at the distant switchboard in the exchange, thereby giving the signal.

"Separate toll switchboards" and "incoming trunk or B-switchboards" are additional equipment in the larger exchanges, and should not be confused with manual or automatic subscribers' boards.

A common-battery system, accommodating several hundred and frequently several thousand subscribers, often requires an elaborate equipment, consisting of a storage battery, a dynamo for charging the battery, the necessary prime movers (electric motors or engines) for actuating the dynamo, a power switchboard, and main and intermediate distributing frames, etc.

A magnetosystem, rarely having more than a few hundred subscribers, has little central-office equipment beyond a distributing board, the switchboard with a few cells of primary battery for working the operators' transmitters, hand magneto-generators for ringing, and sometimes power-driven ringers (small motor generators or dynamotors).

The number and horsepower of engines, dynamos, and electric motors (for telephone service only, not for lighting or other purposes) are asked for. The horsepower of these machines is easily ascertainable, being usually found on the name plate of the machine itself; if not, the engineer or electrician should be able to give it of his own knowledge. Electric motors are often known, in this connection, as "motor generators" or "dynamotors." They are used to convert the current to a lower or higher voltage. This current is sometimes put directly on the wire from the motor generator, but usually is fed into storage batteries, from which it is used as occasion requires.

The difference between the "total number of drops or jacks *in use*" of the manual and automatic subscribers' switchboards as reported in the first section of the inquiry, and the "total number of drops or jacks equipped, or ready for use, of all subscribers' or A-switchboards" as reported for the first subquestion of the second section of the inquiry, should be the number of drops or jacks ready for but not in actual use.

Distributing frames or boards should not be confounded with switchboards. Main distributing frames are those by which the wires are received into the exchange from the conduits or poles and distributed to the operating rooms; tester boards, by which the wires are tested for defects when complaints are made, may be attached to them. There are sometimes intermediate distributing frames in operating rooms; the number of these is also called for. Through them the wires are distributed to the switchboards. The number of hand magneto-generators and power-driven ringers is required. This is the number at exchanges, not those attached to subscribers' telephones. The number of cells of batteries is the number of jars. Primary batteries generate electricity by the action of dilute acid upon metallic zinc plates (the ordinary method); storage batteries are those in which electricity is stored, usually in lead plates, by means of the current. The number of cells at the *exchanges*, not those at subscribers' telephones, is required.

#### INQUIRY 13.—EMPLOYEES, SALARIES, AND WAGES.

This statement is required in order to obtain the number and wages for the year of each class of employees specified. Account for all persons employed by the company, both in the management and in the operation of the line. The number of employees who were engaged on new construction work and their salaries or wages should not be included in answer to this inquiry. The wages of such employees should show only in the amount reported for Inquiry 15—cost of lines, real estate, equipment, etc., added during the year. Give the number of officers who receive salaries (not the number of stockholders) and the amount of their salaries for the period covered by the report. Report separately the number and wages of operators. The salaries and wages should include the allowance for board or rent furnished as part compensation. The average number employed during the year is the number that would have continuous employment for the twelve months. There should be no difficulty in securing this information from a company of ordinary size, but it may be that the large companies keep an itemized pay roll, the total only being carried forward from each week or month. In such cases it will be necessary either to add the pay roll of each week or month for each class of employees or to compute the aggregate for each class, using a pay roll for a representative week or month as the base. Results obtained by the latter method will be accepted.

#### INQUIRY 14.—INCOME AND EXPENSES FOR THE YEAR COVERED BY THE REPORT.

This is what is known as an "income account," not a cash statement, and is intended to show the earnings and expenses of the company for one year.

*Income.*—The items under the head of "income" generally explain themselves. "Total income from telephone business" means total earnings for the use of telephones—from subscribers (including those having private-branch exchanges) and pay stations of all kinds, as well as total receipts either for messages sent or received. The amount received for the leasing of telephone lines, wires, and conduits should be given in answer to the fourth question. If instruments are rented with these leased lines (which may be a system) or with the wires (which may be only a single wire), receipts for such should be included under this head. Sometimes conduits may be leased, in part, to another telephone company, or to a city, or to an electric-light company. The receipts for this rental should be placed under this item. "Real-estate rentals" cover receipts from rental of offices, buildings, or land; and "interest," amounts received as interest on money loaned. It is possible that some companies have a separate messenger service and that an independent revenue is derived from that source. This and all receipts from sources other than those enumerated should be in-

cluded under "miscellaneous." The principal items should be specified.

*Expenses.*—All payments for the general operation and maintenance of the company, lines, and system, except as indicated by the other questions, are to be placed opposite the first question. This item should also include, among other things, the total salaries and wages of Inquiry 13; legal expenses, which should include everything paid in settlement of claims for damages, law charges, and counsel fees, of whatever kind, whether for securing franchises, for reorganization, for funding processes, or for securing right of way; supplies and materials of all kinds (wire, telephones, etc.) consumed during the year, etc. Expenses and wages incident to new construction should not be included; these should be reported under Inquiry 15. "Telephone traffic paid or due for the year to other companies" means toll paid to other companies for the transmission of messages or talks. The first six questions should be considered as relating to operation and maintenance, and the last three questions as relating to fixed charges.

Taxes on gross earnings and special payments of a percentage on gross earnings should be reported as taxes on "earnings," irrespective of whether paid to state or city governments. A special tax on poles should be reported as "miscellaneous" taxes rather than "real and personal property." The instructions for Inquiry 20 of the railway schedule should be followed in answering the questions of this inquiry relating to "interest." (When funded debt is shown as a liability, interest should be reported as paid on funded debt or proper explanation made under "Remarks" on the last page of the schedule. In like manner if real-estate mortgages and floating debt are shown as a liability, interest should be reported or explanation made.) "Paid for use of leased lines" should be construed to mean lines or systems *permanently* leased. The expense of incidentally leasing wires should be included in "total general operation and maintenance, etc."

In all this income and expense showing, the statements as given by the companies ought to be accepted as correct, unless they are grossly at variance, containing irreconcilable inconsistencies. In such cases, after the agent has familiarized himself with the subject so that he can make a clear statement from his own point of view, a friendly suggestion of apparent inconsistencies will generally clear up the difficulties and lead to corrections, if such are necessary.

#### INQUIRY 15.—COST OF LINES, REAL ESTATE, EQUIPMENT, ETC., ADDED DURING THE YEAR (INDICATE WHETHER BY PURCHASE OR CONSTRUCTION).

The amount reported for this inquiry should not be included in any of the expense items of Inquiry 14. The term "lines" is intended to include all things necessary to complete a system for operation—poles, wires, conduits, terminal buildings, offices, etc., and all attachments not considered as equipment. "Equipment" consists of the power-house plant, engines, dynamos, motors, batteries, switchboards, distributing frames, arrester boards, telephones of all kinds, telephone cabinets, desks, etc., and all else not included as "lines." The total expenditure for additions or extensions during the year must be given in answer to this inquiry.

#### INQUIRY 16.—BALANCE SHEET.

The first item of assets called for is intended to include the total cost of construction and equipment of the entire system at the end of the year covered by the report, including real estate and telephone instruments, and should also include the cost *during* the year as reported in Inquiry 15. Telephone cabinets, control desks, etc., either in use or on hand at the close of the year should, if owned, be included in this item.

In cases of unincorporated companies, individuals, firms, etc., which have no liabilities of capital stock and bonds, the amount

of cash invested should be entered under "cash investment" of "liabilities." The other items called for are self-explanatory. All these are to be given at the value carried on the books of the company at the end of the year covered by the report.

In addition to the above, the instructions for Inquiry 21 of the railway schedule should be followed in answering this inquiry. (See page 558 of the report on Street and Electric Railways, 1907.)

#### INQUIRY 17.—CAPITAL STOCK, BONDS, DIVIDENDS, AND INTEREST.

Account for the entire amount of stock and bonds authorized by charter, and the amount outstanding on the last day of the year covered by the report. Give full amounts of dividends declared and interest paid or due for the year. The rate of interest should always be stated, even though no interest may have been paid or due for the year. In some cases companies have been reorganized or consolidated, and the new company has issued stock, the new stock being accepted by the holders of the original stock which was surrendered to the new company. The new company may also issue bonds and assume the debt represented by the bonds of the original companies, which may or may not be retired. In such cases there may be no cash realized on either the stock or bonds of the new company, but the amount of stock and bonds issued by the new company, and also the stock and bonds *outstanding* of the original company must be given. The amounts of the old and new companies should be given separately. The agent should attach a memorandum to the schedule, giving a full explanation of the issues of the stock and bonds of both companies.

#### INQUIRY 18.—POLES PURCHASED DURING 1907.

This inquiry comprises a part of the annual investigation of consumption of forest products and should be treated as separate and distinct from the census of electrical industries. It *must not*, however, be overlooked by the agent, and must be answered for every company.

#### INDEPENDENT FARMER OR RURAL LINES. (SCHEDULE D8-235.)

All independent farmer or rural telephone lines that have no exchange or "central" of their own must be reported on the short schedule, Schedule D8-235. This, of course, includes all lines of this character that connect with exchanges of commercial companies or systems but which are owned independently of such companies. In many cases independent farmer or rural lines are operated in connection with but not owned by commercial or mutual systems. In these cases the report for the commercial or mutual system through which they operate would include the "estimated total number of messages or talks" for the year of such lines, but not the wire mileage, telephones, etc., which should be reported separately on the short schedule.

If several farmer or rural lines jointly maintain and operate an exchange or "central," one report should be obtained on Schedule D6-232 for the several lines and the exchange, and the names of the lines given under "Remarks."

It is intended to secure the reports for the independent farmer or rural lines so far as possible by correspondence, and special agents will not be required to visit places for the exclusive purpose of securing reports for such lines, unless especially instructed to do so. Schedules must be secured for all lines of this character when the information can be obtained in places that are visited in connection with one of the other branches of the electrical industries. Agents must also make inquiry concerning all of the farmer or rural lines named on their respective lists and from which reports have not been received. If the necessary information for such lines can be secured by the use of the telephone or in any other manner, without incurring the expense of a special trip, reports should be so secured and the source of the information given on the schedule. If the agent is advised that the line has gone out of existence or has been consolidated with some other line or system, he must report the facts by letter, giving the office numbers, names, and addresses of the lines or companies involved, so that the office lists can be corrected.